

**IN THE ABSTRACT:**

A radio frequency identification (RFID) tag antenna system includes a planar two arm logarithmic spiral antenna with a suitably small form factor. There are two arms are of conductive foils or etched copper plating on a substrate the extend outwardly from a center in a logarithmic fashion. The two arms are identical to each other but rotated in the plane by 180 degrees. The arms also grow proportionally in width as they extend outward, but at any given distance from the center the width of both arms are equal to each other and, preferably, equal to the spaces between the arms. An impedance matching network receives the RF signal received by the dual spiral antenna and feed the RF signal to an electronic circuit that rectifies and multiplies the signal to form a DC signal that charges a capacitor. The electronics may be built onto the same substrate as the planar antenna, but preferably, the electronic circuit is built onto a second substrate and is mounted, making appropriate electrical connections, to the antenna bearing substrate.